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Operating Instructions

TM1-TS WiFi RF



01/13 Revision 1

Ref: TM1-TSWIFI RF

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Setting up your WiFi Timeclock

Step 1: Download and install the network utility from our web site: www.heatmiser.co.uk/wifi

Step 2: Connect the timeclock to your pc with the USB cable provided, this will power the timeclock from the USB port & will allow you to test the Wi-Fi connection.

On the Utility press Read to view the current timeclock configuration.

Step 3: You should enter the SSID, Security Type and Security Code of your wireless network. These settings can be found in your wireless router, consult your router manual for more information. For more details see security types below.

Step 4: You need to enter a fixed IP address for your Wi-Fi timeclock outside of the router DHCP range.

It is likely that your network will be configured to operate on a DHCP basis – this means your router automatically issues an IP address to a device that successfully connects to the network.

Your Wi-Fi timeclock needs a fixed IP address in order for local and remote access to operate, so you will need to set this up manually.

Log into your wireless router and navigate to the LAN settings page. You should see an option for DHCP setup. This should detail the IP range that can be assigned to devices connecting to the network.

As an example, you may have an IP starting range 192.168.1.1 and ending 192.168.1.99.

This would mean you can safely provide your Wi-Fi Timeclock the IP address 192.168.1.100 as no other devices will be assigned this address by the router.

If your DHCP range is from 192.168.1.1 to 192.168.1.253 you cannot use 254 or above, you will need to change the DHCP range, taking care not to change any of the first 3 numbers.

Tip! When setting up an IP address, the first three sets of numbers must be the same as the router IP, the fourth set must not be used elsewhere on the network.

Step 5: Enter the Subnet mask for the network, this information can be found in your wireless router.

Step 6: You need to enter the IP address of your gateway and DNS. In most cases, this is the IP address of your wireless router. If you are using the Multi-Link on the system, the gateway of the timeclock will need to be the IP address of the Multi-Link.

Step 7: *Browser Username & Password*

You should now create a username and password that is used when you access your timeclock from a web browser. The default username is admin and the default password is also admin.

Access PIN

The access PIN is required when you are using the iPhone app and helps secure your system. This PIN should be entered in the Network Setup screen.

Step 8: *Checking Connection*

Once you have entered the details of your Wi-Fi network press Apply and disconnect your timeclock wait 5 seconds then reconnect it. Once the timeclock has rebooted wait approximately one minute, you should then see the Wi-Fi symbol on the display indicating the Wi-Fi Timeclock has successfully connected to your network. The Wi-Fi symbol is 3 curved lines just below the OFF button.

Security Types & Compatability Explained

The Wi-Fi Timeclock operates on the 802.11b standard. If your router is a G model, you should ensure it is setup to work in B&G mode otherwise you will not be able to connect to your timeclock.

There are currently 4 methods of securing your wireless connection in common use

These are :

OPEN/DISABLED	(not recommended)
W.E.P.	(lowest security level)
W.P.A.	(medium security)
W.P.A.2.	(highest security)

Your choice of security settings in the timeclock must match the setting in your router. Quite often you will find WPA and WPA2 as a single option in the router this is perfectly normal the router knows which one to use, and you can therefore set the timeclock up using either one. The password can be up to 63 characters in length including spaces _ . / \ characters.

The W.E.P. option is not so simple. Some routers generate a hidden password from a pass phrase whilst others require a

10 or 26 digit hex password and won't accept anything else. Your timeclock utility can deal with both options.

The following restrictions apply:

A hex password can only be made up of the numbers 0 to 9 and the letters a to f, lower case only.

Hex passwords can only be 10 characters or 26 characters in length.

If a passphrase is used it must be either 5 or 13 characters in length but can be any letter or number.

Your timeclock will automatically calculate the same hidden password your router creates from the same phrase.

You will find most routers have these same restrictions.

Pairing the Timeclock with the RC1-W receiver

If using the UH1-W wiring centre as the receiver turn to page 8

On the RC1-W:

Press & hold the pairing button on the RC1-W receiver until the comms led lights up.

On the TM1-TS WiFi RF:

- Press Prog then Setup.
- At the top of the screen press the Up button to select feature 06.
- Use the up/down buttons in the centre of the screen & set the large number to 01, this configures the timeclock to communicate with the RC1-W.
- Press the UP button at the top of the screen to select feature 07.
- Use the up/down buttons in the centre of the screen to select the RC1-W receiver address you are communicating with.(01-32)
- Press the up button at the top of the screen to select feature 08.
- Use the up/down buttons in the centre of the screen to select which zone on the RC1-W you are assigning the timeclock to. (01-02)
- Press the DONE button.

To pair the timeclock with the receiver, press & hold the SCREEN button for 10 seconds:

Pair Successful

The address of the receiver will flash on the timeclock display & the comms led will flash on the RC1-W receiver.

Press DONE on the timeclock to confirm pairing with the RC1-W receiver.

Pair Fail

If the Comms LED on the receiver does not flash, there could be a problem with the RF signal. Reduce the distance between the timeclock and receiver, where possible check that no metal objects are blocking the signal. Also check that features 06 – 08 have been configured correctly.

Pairing the timeclock with the UH1-W

On the UH1-W:

Set the board id number on the UH1-W by selecting from 01-09 indicated on the rotary switch. Each UH1-W on the system will need a different id number.

On the TM1-TS WiFi RF:

- Press Prog then Setup.

- At the top of the screen press the Up button to select feature 06.
- Use the up/down buttons in the centre of the screen & set the large number to 00, this configures the timeclock to communicate with the UH1-W.
- Press the UP button at the top of the screen to select feature 07.
- Use the up/down buttons in the centre of the screen to select the UH1-W board id number you are communicating with. (01-09)
- Press the up button at the top of the screen to select feature 08.
- Use the up/down buttons in the centre of the screen to select which zone number on the UH1-W you are assigning the timeclock to. (01-08)
- Press the up button at the top of the screen to select feature 09.
- Use the up/down buttons in the centre of the screen to select if the timeclock will bring on the pump & boiler outputs. 00=UFH (Outputs enabled) 01=Radiator (Outputs not enabled).
- Press the Done button.

Remote Connection Setup

In order to connect to your WiFi timeclock remotely, you need to forward ports within your router to the WiFi timeclock.

This is usually configured in the Port Forwarding section of the router, as all routers are configured differently, you will need to consult your router user manual or the manufacturers website for more information.

As a brief outline, you should first create a new service within your router, specifying the port number and the IP address to forward to, the port numbers needed are explained below.

Remote access via smartphone/tablet

To access your WiFi timeclock remotely via smartphone or tablet, you need to forward port **8068** to the IP address of your WiFi timeclock.

Remote access via web browser

To access your WiFi timeclock remotely via web browser, you need to forward port **80** to the IP address of your WiFi timeclock.

Connecting to the Timeclock from your Web Browser

To connect to your timeclock, open your preferred browser and enter the IP address that you gave the timeclock during setup and press enter. You will now be asked for a password and username, these are both “admin” as default. We recommend you change these settings to ensure the security of your system.

For further information, click the help link within the browser.

Connecting to the Timeclock from your Smartphone or Tablet application

To connect to your timeclock, launch the app on your smartphone or tablet, there are now three sections to fill in.






Lan IP – This is the static IP address you have assigned to the WiFi timeclock.

WAN IP – This is either your static IP address or Dynamic DNS address when connecting to your network remotely.

PIN – This is the four digit pin number assigned to the WiFi timeclock on configuration.

Once this information has been entered the app will store this for the next time you connect.

Wi-Fi Display Guide





	Shown on the PRT-ETS WiFi Model. Displayed when the floor temperature rises above the floor limit temperature.
ROOM TEMP	Indicates the current room temperature.
FLOOR TEMP	Indicates the current floor temperature (PRT-ETS WiFi Only).
	Indicates the thermostat is in Away Mode.
	Indicates the thermostat has successfully connected to the Wi-Fi Router.
	Indicates the heating output is on.
	Indicates the thermostat is locked.
TIMER ON TIMER OFF	Indicates whether the timed output is on or off.
°C °F	Temperature Format Display.
CLEAN SCREEN	Shown when the thermostat is in "Clean Screen Mode" During this mode, all buttons are disabled to allow for cleaning of the thermostat.
HOLIDAY LEFT	Shown during a holiday to indicate holiday time remaining.
HOLD	Shown during a hold period to indicate the hold time remaining.
WAKE	Wake, Leave, Return, Sleep are the 4 comfort settings available.
TIME 1	Time 1-4 are available only on the PRTHW and TM1 versions.

Understanding the Modes

The TM1-TS WiFi has three modes of operation.

- 5/2 Day Time-clock
(Provides 4 On/Off switching times for the weekday and 4 On/Off switching times for the weekend)
- 7 Day Time-clock
(Provides 4 On/Off switching times for each day of the week)
- Countdown Timer
(Allows you to enable the output for a countdown period)

Selecting the Mode

- Press PROG and select Setup.
- At the top of the screen you will see   and the number 06. Use the Up arrow until the display shows number 16.
- In the centre of the screen, use the   to set the desired mode.
- **00** = 5/2 Day **01** = 7 Day **02** = Countdown timer.
- Press Done to store and exit.

Setting The Clock

To set the clock, follow these steps:

- Press Prog
- Press Clock
- Enter the Time (In 24hr Format)
- Press Clock
- Enter the day and month
- Press Clock
- Enter the Year
- Press Done





The clock can also be set via the Browser or app.

5/2 Day / 7 Day Programmable Mode

The following switching times are programmed already, however you can change them easily.

Weekday	On Time	Off Time	Weekend	Time	Temp
Wake	07.00	09.00	Wake	07.00	09.00
Leave	16.00	20.00	Leave	16.00	20.00
Return	--.---	--.---	Return	--.---	--.---
Sleep	--.---	--.---	Sleep	--.---	--.---

Changing the Switching Times

- Press PROG.
- Select Time 1.
- You will see TIME 1 and ON flash.
- Use   to set the on time for the 1st switching time.
- Press Off and then use   to set the off switching time.
- You should now repeat for the Times 2-4.
- Press Day to select the next day. In 5/2 day mode the TM1-TS WiFi will highlight “Sat Sun” prompting you to program the switching times for the weekend. In 7 day mode, the TM1-TS WiFi will highlight Tuesday.
- When complete, press Done to Store and Exit.

Switching Time Override

The TM1-TS WiFi has an override function allowing you to override the output into the opposite state.



- Press Hold.
- If the output is already On – press Off.
- If the output is already Off – press On.

You will then see the output status change and the output indication will flash to show it has been overridden from the programmed setting. The output will remain in the override state until the next programmed time. To cancel, repeat the steps above.

Timeclock Off

To turn the timeclock off completely, press and hold the Off button. The display and output will be turned off. To turn the timeclock back on, press the On button.

Count Down Timer Mode


- Use   to select the Countdown time.
- Press Done.

The output will be active until the Countdown time expires and the hold duration will display the time left.

To cancel the Countdown early, repeat the steps above reducing the time to 00.00.

Locking the Keypad

The TM1-TS WiFi has a keylock facility. To enable this press the bottom right corner of the display and hold for 10 seconds.

When activated, you will see .

To cancel, repeat the steps above.

Holiday

The Holiday function turns the output off for the number of days programmed. During the holiday, the timeclock will indicate the number of holiday days left.

Assume you program a holiday on Monday for 1 day, the holiday will start immediately, but the timeclock will count the next day (Tuesday) as the holiday. The timeclock will then revert back to its program at midnight Tuesday.

- Press HOLIDAY.
- Enter the duration of your holiday.
- Press Done.
- To cancel a Holiday, reduce the Holiday time to 00 days.

Clean Screen

Pressing Clean Screen will disable all buttons, allowing you 15 seconds to wipe the screen clean.

Factory Reset

The timeclock has a factory reset function. This will reset all settings back to their factory default.

To perform a factory reset, follow these steps:

Turn off the timeclock by pressing and holding the off button. Press and hold the bottom left corner of the LCD for 10 seconds. You will see all the icons appear for 2 seconds and then disappear. You now need to power down the timer for 5 seconds and then power on again.

THE FOLLOWING SETTINGS ARE OPTIONAL AND IN MOST CASES NEED NOT BE ADJUSTED

Optional Features Explained

Feature 06 - UH1-W or RC1-W Receiver: The thermostat can work with our UH1-W or RC1-W. This setting determines which is being used. 00 = UH1-W, 01 = RC1-W.

Feature 07 – Receiver Address: Within one building, up to 9 UH1-W's or 32 RC1-W receivers can be used. Each receiver must have a unique receiver address.

Feature 08 – Zone Number: This is the zone number you are assigning the thermostat to on either the UH1-W or the RC1-W receiver. 01-08 - UH1-W, 01-02 – RC1-W

Feature 09 – Underfloor Heating or Radiator Zone (UH1-W Only): This setting determines whether the thermostat will activate the pump & boiler output on the UH1-W. If set to 00 the outputs will be activated.
00 = UFH, 01 = Radiators





Feature 10 – Fail Safe: If enabled, the thermostat will send a signal to the receiver every 20 minutes. Should the

receiver fail to receive two signals, the receiver will activate the output for 20% of the time. This is to protect the system against a loss of wireless signal or should the thermostat battery fail whilst you are away.

Feature 16 – Mode Select: This function allows you to select between 5/2 Mode, 7 Day mode or Countdown timer.

Adjusting the Optional Settings

To adjust the settings, follow these steps:

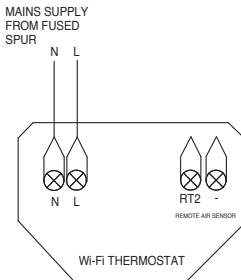
- With the timeclock turned on.
- Press PROG.
- Press SETUP.
- Use the   at the top of the screen to select the feature number (shown on page 20) and then use the   keys in the centre to adjust the setting.
- Press Done to accept and Store.

Feature Table

Feature	Description	Setting
06	Receiver Type	00 = UH1-W 01 = RC1-W
07	Receiver Address	UH1-W = 01-09 RC1-W = 01-32
08	Zone Number	UH1-W = 01-08 RC1-W = 01-02
09	Under-floor Heating or Radiators (UH1-W Only)	00 = UFH 01 = Radiators
10	Fail Safe	00 = Disabled 01 = Enabled
16	Mode Select	00 = 5/2 Day 01 = 7 Day 02 = Countdown

Heatmiser TM1-TS WiFi RF Model

Note this model is designed to work with the RC1-W and the UH1-W
please refer to the appropriate diagram for connections to your heating system.



RECOMENDATIONS

MAX CABLE SIZE 1.5mm

BACK BOX DEPTH 35MM

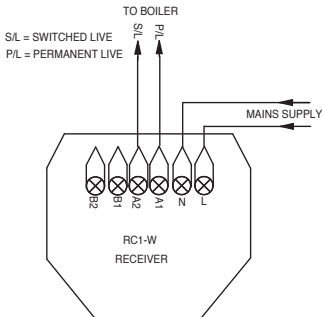
Name WIFI RF

Date 09/01/2012 Rev 001

Drawn by Alan Mee

Heatmiser TM1-TS WiFi RF Model

COMBINATION BOILER SYSTEM



S/L AND P/L CONNECTIONS WILL VARY DEPENDING ON THE
BOILER MODEL , BUT WOULD NORMALLY BE CONNECTED
TO THE THERMOSTAT CONNECTIONS

Heatmiser TM1-TS WiFi RF Model

